

ABSTRACT OF DISCLOSURE

An adaptive beamforming apparatus and method includes a fixed beamformer that compensates for time delays of M noise-containing speech signals input via a microphone array having M microphones (M is an integer greater than or equal to 2), and generates a sum signal of the M compensated noise-containing speech signals; and a multi-channel signal separator that extracts pure noise components from the M compensated noise-containing speech signals using M adaptive blocking filters that are connected to M adaptive canceling filters in a feedback structure and extracts pure speech components from the added signal using the M adaptive canceling filters that are connected to the M adaptive blocking filters in the feedback structure.